Claims

1. A method for selectively inactivating a parasite in a biological composition, comprising contacting the biological composition with a solution comprising an aziridino compound in an amount and under conditions effective to inactivate parasites.

2. The method of claim 1, wherein the biological composition is selected from blood, a red blood cell comprising composition, a red blood cell concentrate, a platelet concentrate, blood plasma, a platelet-rich plasma, a placental extract, a cell culture product or culture medium, a product of fermentation, ascites fluid, serum, a blood cell protein, a blood plasma concentrate, a blood plasma protein fraction, a purified or partially purified blood protein or other component, a supernatant or a precipitate from any fractionation of the plasma, a purified or partially purified blood component (e.g., proteins or lipids), colostrum, milk, urine, saliva, a cell lysate, cryoprecipitate, cryosupernatant, or portion or derivative thereof, compositions containing proteins induced in blood cells, and a composition containing products produced in cell culture by normal or transformed cells.

3. The method of claim 2, wherein the biological composition comprises red blood cells.

4. The method of claim 2, wherein the biological composition comprises platelets.

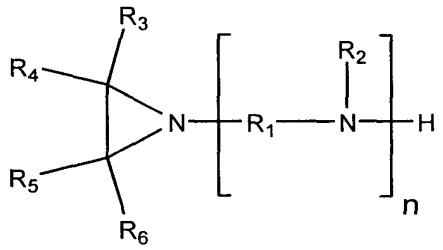
5. The method of claim 2, wherein the biological composition comprises blood plasma.

6. The method of claim 2, wherein the biological composition comprises whole blood.

7. The method of claim 2, wherein the biological composition is derived from humans.

8. The method of claim 1, wherein the aziridino compound contains a linear alkyl group.

9. The method of claim 1, wherein the aziridino compound has the structure of formula II:

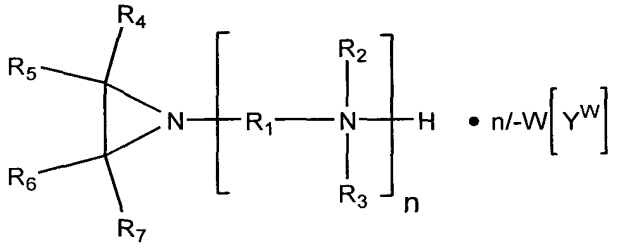


(II)

wherein each R_1 is a divalent hydrocarbon moiety containing between two and four carbon atoms, inclusive; each of R_2, R_3, R_4, R_5, and R_6 is, independently, H or a monovalent hydrocarbon moiety containing between one and four carbon atoms, inclusive; and n is an integer between one and ten, inclusive.

10. The method of claim 6, wherein R_2, R_3, R_4, R_5, and R_6 are H.

11. The method of claim 1, wherein the aziridino compound has the structure of formula III:



(III)

wherein each R_1 is a divalent hydrocarbon moiety containing between two and four carbon atoms, inclusive; each of R_2, R_3, R_4, R_5, R_6, and R_7 is, independently, H or a monovalent hydrocarbon moiety containing between one and four carbon atoms, inclusive; Y is pharmaceutically acceptable counter anion; W is the valency of Y; and n is an integer between one and ten, inclusive.

12. The method of claim 8, wherein R_2, R_3, R_4, R_5, and R_6 are H.

13. The method of claim 1, wherein the aziridino compound is an ethyleneimine oligomer.

14. The method of claim 10, wherein the ethyleneimine oligomer is an ethyleneimine dimer.

15. The method of claim 10, wherein the ethyleneimine oligomer is an ethyleneimine trimer.

16. The method of claim 13, wherein the ethyleneimine oligomer is present at a concentration of at least about 0.005% (vol./vol.).

17. The method of claim 1, wherein at least 90% of the parasitic pathogens in the biological composition are inactivated.

18. The method of claim 17, wherein at least 98% of the parasitic pathogens in the biological composition are inactivated.

19. The method of claim 1, wherein the parasite is selected from the group consisting of *Plasmodium, Babesia microti, Babesia divergens, Leishmania tropica, Leishmania, Leishmania braziliensis, Leishmania donovani, Trypanosoma gambiense, Trypanosoma rhodesiense*, *Trypanosoma cruzi*, and *Toxoplasma gondii*.

20. A method for transfusing a subject with a blood product comprising

inactivating parasites in a blood product according to the method of any of claims 1-19, and

transfusing a subject with the inactivated blood product.

21. The method of claim 20, wherein at least some of the aziridino compound is removed prior to transfusion.

22. The method of claim 21, wherein the solution comprising the aziridino compound is removed by washing the biological composition.

23. The method of claim 20, further comprising quenching the aziridino compound with a quenching agent.

24. The method of claim 23, wherein the quenching agent is soluble.

25. The method of claim 20, wherein the transfusion into the mammal is heterologous.

26. The method of claim 20, wherein the subject is a mammal.

27. The method of claim 26, wherein the mammal is a human.

28. A transfusion product comprising a container containing a biological composition in which parasites are inactivated by the method of any of claims 1-19.

29. The method of claim 20, further comprising contacting a biological composition comprising red blood cells with a solution comprising pyruvate, inosine, adenine and phosphate.

30. The method of claim 29, wherein the aziridino compound, pyruvate, inosine, adenine and phosphate increase the levels of 2,3 DPG, ATP or p50 in the contacted red blood cells by at least 25% in comparison to the levels of 2,3 DPG, ATP or p50 in red blood cells not contacted by the aziridino compound, pyruvate, inosine, adenine and phosphate.

31. The method of claim 1, further comprising contacting the biological composition with parasiticide.

32. A kit for performing the method of claim 1, comprising one or more containers containing an amount of an aziridino compound effective to inactivate parasites.

33. The kit of claim 32, further comprising one or more containers containing a parasiticide.

34. The kit of claim 32, further comprising one or more containers containing a cell washing and/or storage solution.